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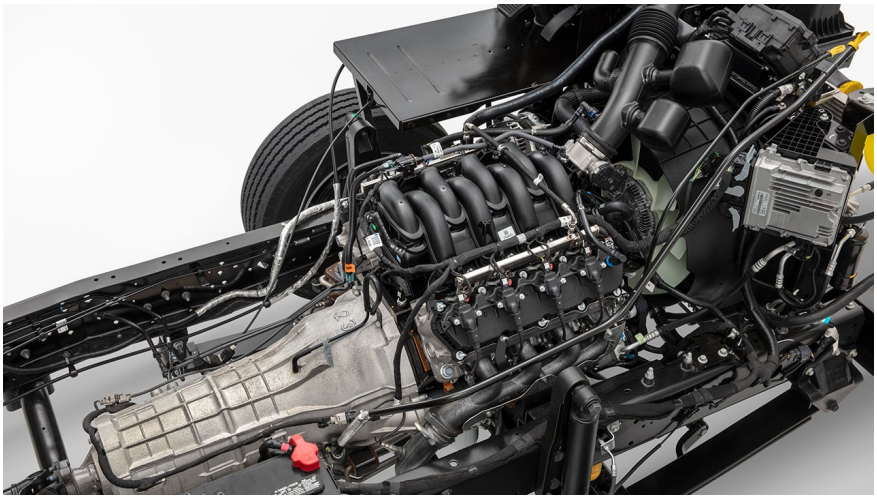
2023

F-53/F-59 Specifications

Ford has always been known for commercial vehicles. For commercial stripped chassis, Ford offers several, including an F-53 (Motorhome) and an F-59 (Step Van) chassis.



NEW FOR 2023

- Electronic Stability Control now standard
- Electronic Stability Control DELETE (55A) now available
- Driver-Assist Technology Package (55C; now available on F-53 and requires the correct Radar Fusion Pack; see the F-53 Order Guide for more information)
- Transmission Range Indicator systems added (F-53 only)

THE F-53 OFFERS POWER AND STRENGTH FOR CLASS A MOTORHOMES:

- Seven wheelbases: 158, 178, 190, 208, 228, 242 and 252 inches
- Six GVWRs ranging from 16,000 to 26,000 lbs.
- 7.3L PFI V8 engine standard
- 6-speed TorqShift automatic transmission with Tow/Haul Mode
- CNG/Propane Gaseous Engine Prep Package available(1)
- Driver Assist Technology Package includes:
  - Automatic Emergency Braking
  - Distance Alert/Distance Indication
  - Post-Collision Braking
  - Adaptive Cruise Control
  - Lane Departure Warning
  - Driver Alert System
  - Transmission Range Indicator
  - Requires Electronic Stability Control

THE F-59 COMMERCIAL CHASSIS OFFERS:

- Five wheelbases: 158, 168, 178, 190 and 208 inches
- GVWRs: 16,000, 19,500 and 22,000 lbs.
- 50-degree wheel cut for excellent maneuverability
- 7.3L PFI V8 engine standard
- 6-speed TorqShift automatic transmission with Tow/Haul Mode
- CNG/Propane Gaseous Engine Prep Package available(1)
- Two Driver-Assist Technology Packages

(1) Vehicle will be equipped with the standard factory gasoline fuel delivery. This package does not include compressed natural gas/propane fuel tanks, lines, etc.

NOTE: For product features, please see the Dealer Ordering Guides for availability.

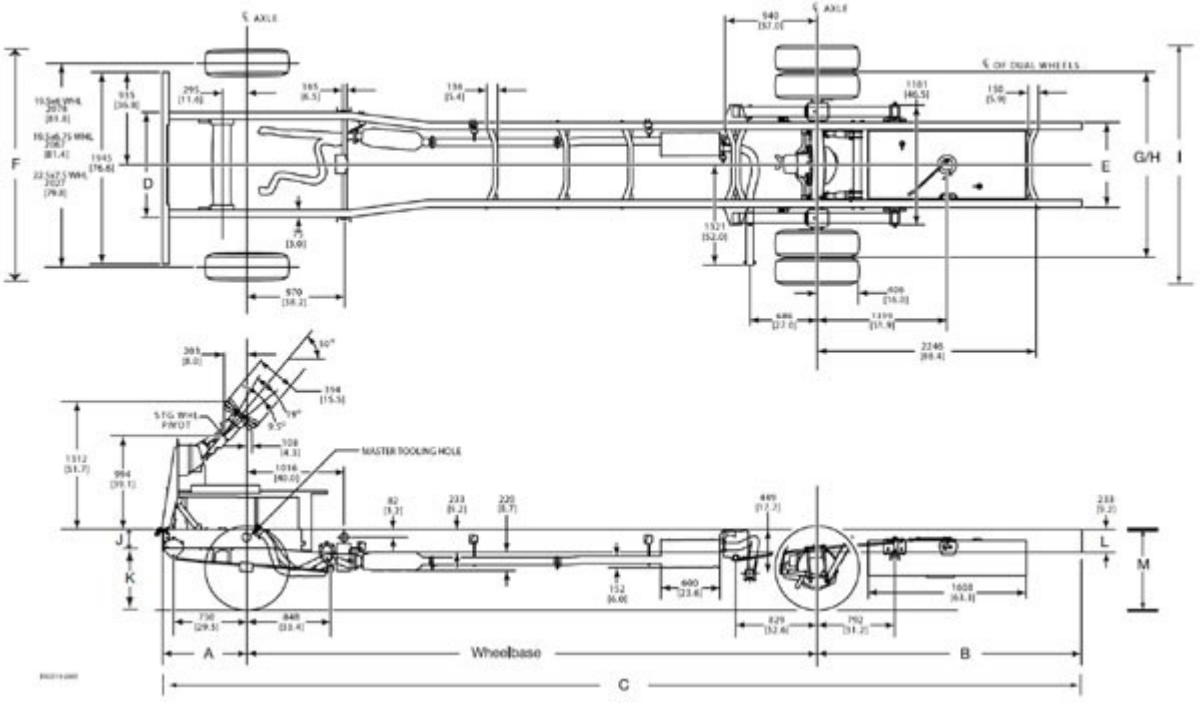
2023

F-53 Motorhome Specifications

Use the Menu above — or the Menu button on your smartphone — to select and view information related to key product specifications, including vehicle dimensions and capacities, detailed chassis systems information, transmission gear ratios and more.

2023 > F-53 Motorhome Specifications

Dimensions



GVWR (lbs.)		16,000	16,000	16,000	18,000	18,000	18,000	18,000	20,500	20,500
Wheelbase (in.)		158	178	190	178	190	208	228	208	228
Code	Description (in.)									
A	Front Overhang	36.3	36.3	36.3	36.3	36.3	36.3	36.3	36.3	36.3
B	Rear Overhang	105.8	105.8	105.8	105.8	105.8	105.8	105.8	105.8	105.8
C	Overall Length	300.1	320.1	332.1	320.1	332.1	350.1	370.1	350.1	370.1
D	Front Frame Width	41.9	41.9	41.9	41.9	41.9	41.9	41.9	41.9	41.9
E	Rear Frame Width	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0
F	Tire Outside Width (Front)	91.6	91.6	91.6	91.6	91.6	91.6	91.6	91.6	91.6
G	Tire Outside Width (Rear Inner)	72.8	72.8	72.8	72.8	72.8	72.8	72.8	72.8	72.8

H	Tire Center Width (Rear)	74.0	74.0	74.0	74.0	74.0	74.0	74.0	74.0	74.0
I	Tire Outside Width (Rear Outer)	95.4	95.4	95.4	95.4	95.4	95.4	95.4	95.4	95.4
J	Frame Front Section Height	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
K	Frame Height @ Front Wheel(1)	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.3	28.3
L	Frame Rear Section Height	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2
M	Frame Height @ Rear Axle(1)	30.3	30.3	30.3	30.3	30.3	30.3	30.3	30.7	30.7

GVWR (lbs.)		**22,000**	**22,000**	**22,000**	**24,000**	**24,000**	**24,000**	**26,000**	**26,000**	**26,000**
Wheelbase (in.)		**208**	**228**	**242**	**228**	**242**	**252**	**228**	**242**	**252**
Code	**Description (in.)**									
A	Front Overhang	36.3	36.3	36.3	36.3	36.3	36.3	36.3	36.3	36.3
B	Rear Overhang	105.8	105.8	105.8	105.8	105.8	105.8	105.8	105.8	105.8
C	Overall Length	350.1	370.1	384.1	370.1	384.1	394.1	370.1	384.1	394.1
D	Front Frame Width	41.9	41.9	41.9	41.9	41.9	41.9	41.9	41.9	41.9
E	Rear Frame Width	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0
F	Tire Outside Width (Front)	90.7	90.7	90.7	92.7	92.7	92.7	92.7	92.7	92.7
G	Tire Outside Width (Rear Inner)	70.3	70.3	70.3	70.2	70.2	70.2	70.2	70.2	70.2
H	Tire Center Width (Rear)	72.8	72.8	72.8	71.9	71.9	71.9	71.9	71.9	71.9
I	Tire Outside Width (Rear Outer)	95.4	95.4	95.4	95.2	95.2	95.2	95.2	95.2	95.2
J	Frame Front Section Height	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
K	Frame Height @ Front Axle(1)	30.5	30.5	30.5	31.2	31.2	31.2	31.2	31.2	31.2
L	Frame Rear Section Height	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2
M	Frame Height @ Rear Axle(1)	30.7	30.7	32.9	33.9	33.9	33.9	33.9	33.9	33.9

(1) Dimensions are for reference only. Actual heights may vary due to product tolerances.

2023 > F-53 Motorhome Specifications

Weight Ratings

F-53 Class A Motorhome Chassis — GVWR/Payload/GCWR & Trailer Weight/GAWR/Base Curb Weight

Drive/WB (in.)	Engine/ Trans.	Maximum GVWR (lbs.)	Maximum Payload (lbs.)(1)	Maximum GCWR/Trailer Weight (lbs.)	GAWR (lbs.)(2)		Base Curb Weight (lbs.)(3)		
					Front	Rear	Front	Rear	Total
4x2 — 158	7.3L/Auto	16,000	9,690	23,000/7,000	6,500	11,000	3,088	3,219	6,307
4x2 — 178	7.3L/Auto	16,000	9,670	23,000/7,000	6,500	11,000	3,109	3,221	6,330
	7.3L/Auto	18,000	11,630	23,000/5,000	7,000	12,000	3,122	3,240	6,362
4x2 — 190	7.3L/Auto	16,000	9,650	23,000/7,000	6,500	11,000	3,111	3,232	6,343
	7.3L/Auto	18,000	11,590	23,000/5,000	7,000	12,000	3,176	3,227	6,403
4x2 — 208	7.3L/Auto	18,000	11,530	23,000/5,000	7,000	12,000	3,223	3,241	6,464

	7.3L/Auto	20,500	13,970	26,000/5,500	7,000[4]	13,500	3,259	3,271	6,530
	7.3L/Auto	22,000	15,300	26,000/4,000	8,000	15,000	3,289	3,410	6,699
4x2 — 228	7.3L/Auto	18,000	11,460	23,000/5,000	7,000	12,000	3,275	3,257	6,532
	7.3L/Auto	20,500	13,900	26,000/5,500	7,000[4]	13,500	3,311	3,287	6,598
	7.3L/Auto	22,000	15,210	26,000/4,000	8,000	15,000	3,348	3,437	6,785
	7.3L/Auto	24,000	16,730	30,000/6,000	9,000	15,500	3,500	3,767	7,267
	7.3L/Auto	26,000	18,720	30,000/4,000	9,000	17,500	3,500	3,779	7,279
4x2 — 242	7.3L/Auto	22,000	15,140	26,000/4,000	8,000	15,000	3,390	3,462	6,852
	7.3L/Auto	24,000	16,660	30,000/6,000	9,000	15,500	3,542	3,792	7,334
	7.3L/Auto	26,000	18,650	30,000/4,000	9,000	17,500	3,542	3,804	7,346
4x2 — 252	7.3L/Auto	24,000	16,610	30,000/6,000	9,000	15,500	3,555	3,826	7,381
	7.3L/Auto	26,000	18,600	30,000/4,000	9,000	17,500	3,572	3,822	7,394

(1) Load rating represents maximum allowable weight of people, cargo and body equipment and is reduced by optional equipment weight.

(2) Gross axle weight rating is determined by the rated capacity of the minimum component of the axle system (axle, springs, wheels, tires) of a specific vehicle. Front and rear GAWRs will, in all cases, sum to a number equal to or greater than the GVWR for the particular vehicle. Maximum loaded vehicle (including passengers, equipment and payload) cannot exceed the GVW rating or GAWR (front or rear).

(3) Base Curb Weights shown above consider the strip chassis weight with standard equipment, full fuel tank and all other fluids filled to capacity. Optional equipment weights are in pounds as follows (Front/Total): 19.5" x 6.75" Tires and Wheels (available with 22,000-lb. GVWR only) (-39/-76); Track Bar Heavy-Duty Front Suspension (available with 16,000-lb. GVWR only) (32/32).

(4) 20.5K GVWR Upgrade Package (20R) includes optional 7,500-lb. FGAWR (68R).

NOTE: Refer to Standard Equipment for Standard Powertrain/Chassis Equipment Specifications.

2023 > F-53 Motorhome Specifications

Standard Powertrain/Chassis Equipment Specifications

Drive:		**4x2**
POWERTRAIN:		
Engine	Application	50 states
	Type	7.3L PFI V8 (incl. engine oil cooler)
Transmission	Type	TorqShift HD 6-speed with Tow/Haul Mode
	Speeds	6-speed with overdrive
AXLES:		
Front Axle	Type	Forged I-beam
	Capacity (rating @ ground)	6,500 and 7,000 lbs. (16,000-/18,000-/20,500-lb. GVWR), 7,500 lbs. (20,500-lb. GVWR option), 8,000 lbs. (22,000-lb. GVWR), 9,000 lbs. (24,000-/26,000-lb. GVWR)
	King pin angle	5.5° (16,000-lb., 22,000-lb. GVWR); 6.5° (24,000-lb., 26,000-lb. GVWR)
	Caster angle	4.6° (16,000-lb., 22,000-lb. GVWR); 4.25° (24,000-lb., 26,000-lb. GVWR)
Rear Axle	Type — Full-floating	Full-floating, Dana
	Capacity (rating @ ground)	11,000 lbs. (16,000-lb. GVWR), 12,000 lbs. (16,000- to 18,000-lb. GVWR), 13,500 lbs. (20,500-lb. GVWR), 15,000 lbs. (22,000-lb. GVWR), 17,500 lbs. (24,000- to 26,000-lb. GVWR)
	Axle ratio	4.88 (16,000-lb. and 18,000-lb. GVWR); 5.86 (20,500-lb. and 22,000-lb. GVWR); 6.14 (24,000-lb. and 26,000-lb. GVWR)
BRAKES:		
Front/Rear Disc	Type	Dual-piston pin slider calipers, bolt-on adapters, wraparound tie bars (73-mm calipers only)
	Rotor diameter — front/rear	15.0"

Power Assist Unit	Type	Hydro Boost, 8.19 boost ratio (16,000-lb., 18,000-lb. GVWR); Hydro Max, 21.1 boost ratio (20,500-lb. to 26,000-lb. GVWR)
Anti-Lock Brake System (ABS)		4-sensor/4-channel
Parking Brake (Driveline Drum)		Foot-operated, hand release
ELECTRICAL:		
Alternator	Rating	210 amperes, 2,832 watts(1)
Battery	Type	Maintenance-free
	Rating	78 AH., 750 CCA
EXHAUST SYSTEM:	Type	Left-hand, forward-of-rear-axle exhaust exit
FUEL TANK:	Location/capacity	Aft-of-rear-axle (left-hand side fuel fill)/80.0 gal. (302.8 L)
STEERING:	Type	Power, TRW, TAS 40 gear (incl. cooler) (16,000-lb. to 22,000-lb. GVWR) TAS 55 (24,000-lb. to 26,000-lb. GVWR)
	Ratio	18.4:1 (16,000-lb. to 26,000-lb. GVWR)
	Wheel	17.5" diameter
SUSPENSION:		
Frame	Type	Ladder-type, single-channel, 36,000 psi steel (16,000-lb. to 22,000-lb. GVWR); 50,000 psi steel (24,000-lb., 26,000-lb. GVWR)
	Section modulus	9.46 cu. in.
Jounce Bumpers		Front, variable-rate
Springs, Front	Type	Parabolic leaf spring, single-stage, constant rate
	Rating @ ground (min.)	Refer to weight ratings for usage and ratings
Springs, Rear	Type	Parabolic leaf spring, single-stage, constant rate
	Rating @ ground (min.)	Refer to weight ratings for usage and ratings
Shock Absorbers	Gas-pressurized, front/rear	Sachs twin-tube
Stabilizer Bars		Front: Bar diameter 50.8 mm for all versions Rear: Bar diameter 50.8 mm for all versions
Track Bar		Front (std. on 18,000-lb. – 26,000-lb. GVWR; optional on 16,000-lb. GVWR)
TIRES:	Type	Steel-belted radial, highway, BSW
	Size	Six, 245/70R19.5G on 16,000-lb., 18,000-lb. GVWR and 20,500-lb. GVWR; six, 235/80R22.5G standard on 22,000-lb. GVWR (six, 245/70R19.5G opt.); six, 255/80R22.5G on 24,000-lb. and 26,000-lb. GVWR
WHEELS:	Type and size	Six, 10-hole disc, 19.5" x 6.75" steel with 16,000-lb. – 20,500-lb. GVWR, six, 8-hole disc, 22.5" x 7.5" with 22,000-lb., 24,000-lb., 26,000-lb. GVWR — polished aluminum front and outer rear with steel inner rear

(1) 210-amp output based on cold performance at 80º F. Actual output is temperature- and application-dependent.

NOTE: Includes Electronic Speed Control/Tilt Steering Wheel, Tachometer, 17.5" Black Urethane Steering Wheel, Trailer Tow Prep Wiring and Air Conditioning Prep Package (non-precharged). Shipped with a dunnage box that contains the following: Glove Compartment Bag, Tire Warranty and Warranty Facts Booklet, Incomplete Vehicle and Owner's Manual, Rating Plate, V8 Engine Badge (std. F-53/opt. F-59), Labels/Decals/Tags, Fuel Filler (Hose, Cap, Pipe Assembly, Support, Vent Hose), Fuel Tank Auxiliary Port Adapter, Wheel Nut Wrench (with spare tire option only), Horn Pad, Dual Electric Horns and Bracket Assembly, Headlamp Switch Assembly, Traction Control Switch, Hazard Switch, Sun Load Sensor, External Muffler Outlet Pipe and Clamp, V8 Engine Badge, A/C low-pressure switch and O-Ring, Electrical Harness Jumper(s): Electric Brake Controls, Horn, Headlamp, ACC Feed, A/C, Rear Lamp External.

NOTE: Refer to weight ratings for standard weight rating specifications (GVWR/payload/GCWR and trailer weight/GAWR/base curb weight).

Front Axle Specifications

GVWR (lbs.)		16,000	18,000/20,500	22,000	24,000 – 26,000
Type		Forged I-beam			
Max. Rating @ Ground (lbs.)		6,500	7,000	8,000	9,000
Axle	Type	Monobeam			
	Material	Forged steel			
	Spring centers (in.)	41.87			38.88
Ball Joint		Zirked			
Spindle	Material	Nodular cast-iron body with forged steel stem			
Wheel Bearings	Type	Tapered roller			

2023 > F-53 Motorhome Specifications > Axles

Rear Axle Specifications

GVWR (lbs.)		16,000/18,000	20,500	22,000	24,000/26,000
Make (standard)		Dana S110		Dana S130	Dana S140
Max. Rating @ Ground (lbs.)		11,000/12,000	13,500	15,000	17,500
Type		Full-floating			
Driveline Attachment		1480			SPL100
Housing	Type	Banjo, cast carrier			
	Cover attachment	Welded			
Section	Arm dimensions (in.)	4.33 x 4.26	4.33 x 4.26		5.28 x 4.61
Synthetic Lubricant Capacity (pts.; approx. with hubs)		13.6	13.6		21.0
Spring Centers (in.)		42.48	42.48	42.48	42.48
Wheel Bearings	Type	Tapered roller			
Gears	Type	Hypoid			
	Material	Alloy steel			
Ring Gear	Pitch dia. (in.)	12.2	12.2		13.4
Pinion	Mounting	Overhung			
Differential	Type	2-pinion		4-pinion	
Axle Shaft	Spline minor dia. (in.)	1.56	1.56	1.61	1.81
	Spline major dia. (in.)	1.75	1.75	1.85	2.0
	No. of splines (hub end)	34	34	36	39

2023 > F-53 Motorhome Specifications > Brakes

Hydraulic Brake Equipment Specifications — Front/Rear Disc

Type	Axle Usage (lbs.)	Rotor Diameter (in.)		Brake Lining Segment	Area (sq. in.)/ Width (in.)/	Caliper Piston No. Dia. (in.)	Gross Lining Area Per	Total Swept Area Per Axle (sq. in.)

		OD	ID		Thickness (in.)		Axle (sq. in.)	
Front Disc	6,500	15.0	10.12	Outboard	20.4/2.32/0.49	Dual/2.60	81.6	366.6
				Inboard	20.4/2.32/0.49			
	7,000	15.0	10.12	Outboard	20.4/2.32/0.49	Dual/2.60	81.6	366.6
				Inboard	20.4/2.32/0.49			
	7,500	15.0	10.12	Outboard	20.4/2.32/0.49	Dual/2.60	81.6	366.6
				Inboard	20.4/2.32/0.49			
	8,000	15.0	10.12	Outboard	20.4/2.32/0.49	Dual/2.60	81.6	366.6
				Inboard	20.4/2.32/0.49			
	9,000	15.0	10.12	Outboard	20.4/2.32/0.74	Dual/2.87	81.6	366.6
				Inboard	20.4/2.32/0.74	Dual/2.73		
Rear Disc	12,000/13,500/ 15,000	15.0	10.12	Outboard	20.4/2.32/0.49	Dual/2.60	81.6	366.6
				Inboard	20.4/2.32/0.49			
	17,500	15.0	10.12	Outboard	20.4/2.32/0.49	Dual/2.60	81.6	366.6
				Inboard	20.4/2.32/0.49			

2023 > **F-53 Motorhome Specifications** > Brakes

Brake Master Cylinder Specifications

Type	Usage	Bore Dia. (in.)
Dual System, Dash-Mounted	16,000-lb., 18,000-lb. GVWR	1.63
	20,500-lb., 22,000-lb., 24,000-lb., 26,000-lb. GVWR	2.00

2023 > **F-53 Motorhome Specifications** > Brakes

Brake Booster Specifications

Make/Type	Usage	Booster Type	Boost Ratio
Dash-Mounted	16,000-lb., 18,000-lb. GVWR	Hydro Boost	8.19
	20,500-lb., 22,000-lb., 24,000-lb., 26,000-lb. GVWR	Hydro Max	21.1

2023 > **F-53 Motorhome Specifications** > Cooling Sytems

Cooling System Specifications

Engine	Cooling	Trans. Usage	Radiator							Fan Specifications		
			Frontal Area (sq. in.)	Core Size (in.)			Rows of Tubes	Fins Per Inch	Cooling System Capacity (qts./liters)	In-Tank Trans Cooler	Type	No. of Blades	Blade Dia.
				Height	Width	Thick.							

													(in.)
7.3L PFI V8	Std.	6-Speed	857	28.4	30.19	2.20	91	17.8	5.9/5.6	Std.	Engine-Driven	9	20.3

2023 > **F-53 Motorhome Specifications** > Cooling Sytems

Auxiliary Automatic Transmission Oil Cooler Applications

Engine	Transmission	Cooler — No. of Plates
7.3L PFI V8	6-speed automatic overdrive	31

2023 > **F-53 Motorhome Specifications**

Engine

Driveline Layout	Front Engine, Rear Wheel (RWD)
Engine Type	**7.3L PFI V8**
Displacement (liters/cu. in.)	7.3/445
Horsepower (@ rpm)	335 @ 3,750
Torque (lb.-ft. @ rpm)	468 @ 3,750
Compression Ratio	10.5:1
Valvetrain	OHV
Valve Operation	Push rod/rocker arms
Bore & Stroke (in.)	4.21 x 3.98
Main Bearings	5
Induction	Naturally aspirated
Fuel System	Port fuel injection (PFI)
Fuel Requirement (octane)	87 (min.)

2023 > **F-53 Motorhome Specifications**

Fuel System Data

Electronic Fuel Injection	Port fuel injection (PFI)
Fuel Pump	Single electric-in-tank, high pressure
Fuel Filter	In-tank, large-capacity (one)
Air Cleaner	Dry element, replaceable

2023 > **F-53 Motorhome Specifications**

Steering Specifications

Wheelbase (in.)	Power Steering[1]	Turning Diameter (ft.)		
	Gear Ratio	Curb-to-Curb		
		16,000–22,000-lb. GVWR w/19.5" wheels	22,000-lb. GVWR w/22.5" wheels	24,000–26,000-lb. GVWR w/22.5" wheels
158	18.4:1	45.4	—	—
178	18.4:1	49.7	—	—
190	18.4:1	52.2	—	—
208	18.4:1	56.1	63.7	—
228	18.4:1	60.3	68.6	60.6
242	18.4:1	63.3	72.0	66.8
252	18.4:1	—	—	69.5

(1) Power steering fluid cooler is standard.

2023 > **F-53 Motorhome Specifications** > Suspensions

Frame Specifications

Wheelbase (in.)	No. of Crossmembers	Maximum Side Rail Section[1] (Height x Width x Thickness) (in.)	Section Modulus (cu. in.)	16K–22K Yield Strength (psi)	24K–26K Yield Strength (psi)
158	7	9.16 x 3.00 x .025	9.46	36,000	—
178	7	9.16 x 3.00 x .025	9.46	36,000	—
190	7	9.16 x 3.00 x .025	9.46	36,000	—
208	8	9.16 x 3.00 x .025	9.46	36,000	—
228	9	9.16 x 3.00 x .025	9.46	36,000	50,000
242	9	9.16 x 3.00 x .025	9.46	36,000	50,000
252	9	9.16 x 3.00 x .025	9.46	—	50,000

(1) Measured to inside of metal.

2023 > **F-53 Motorhome Specifications** > Suspensions

Shock Absorber Specifications

Type	Usage	Front			Rear		
		No. Used	Piston Rod Dia. (mm)	Type	No. Used	Piston Rod Dia. (mm)	Type
Sachs Twin-Tube	Std.	2	15.0	Gas-pressurized	2	15.0	Gas-pressurized

2023 > **F-53 Motorhome Specifications** > Suspensions

Spring Specifications — Front Leaf

Combined Rating @ Ground (lbs.)	Number of Leaves	Total Thickness (in.)	Overall Length (in.)	Width (in.)	Deflection Rate(1) (lbs. per in./spring)
7,000	2	3.40 for 18.000 GVWR 3.38 for 20.500 GVWR	63.00	4.00	632 for 18.000 GVWR 550 for 20.500 GVWR
7,500	2	3.47	63.00	4.00	650
8,000	2	3.47	63.00	4.00	693
9,000	3	3.31	63.00	3.00	750

(1) Single-stage, constant rate springs.

2023 > **F-53 Motorhome Specifications** > Suspensions

Spring Specifications — Rear Leaf

Combined Rating @ Ground (lbs.)	Number of Leaves	Total Thickness (in., w/o spacer)	Overall Length (in.)	Width (in.)	Deflection Rate(1) (lbs. per in./spring)
11,000	3	2.35	64.00	4.00	952
12,000	3	2.35	64.00	4.00	1,120
13,500	3	2.48	64.00	4.00	1,547
15,000	3	2.48	64.00	4.00	1,547
17,500	4	3.31	64.00	4.00	1,701 for 24,000 GVWR 1,850 for 26,000 GVWR

(1) Single-stage, constant-rate springs.

2023 > **F-53 Motorhome Specifications** > Tires and Wheels

Tire Specifications

Size	Tread Type & Sidewall	Tire Man.	Rim Width (in.)	Section Width(1) (in.)	Ply/Load Rating	Inflation Press. (psi)	Load Limits @ Max. Inflation Press. (lbs.)	Static Loaded Radius (in.)	SAE Rev. Per Mile @ 45 MPH
245/70Rx19.5	Highway-BSW	Continental®	6.75	9.94	12/G	95(2)	3,890/3,655	15.30	633
235/80Rx22.5	Highway-BSW	Michelin®	7.5	9.2	14/G	90	4,140/3,765	17.40	556
255/80Rx22.5	Highway-BSW	Michelin	7.5	9.9	14/G	100	4,975/4,525	17.90	541

(1) Tire and rim maximum width.

(2) 16,000-lb. to 20,500-lb. GVWR = 82 psi, 20,500-lb. GVWR with 7,500-lb. FGAWR and 22,000-lb. GVWR = 95 psi.

2023 > **F-53 Motorhome Specifications** > Tires and Wheels

Wheel Specifications

Wheel Type	Wheel Size	Nominal Offset (in.)	No. of Studs	Bolt Circle (mm/in.)	Max. Wheel Capacity Load (lbs. @ ground)
Steel	19.5" x 6.75" RW	5.50	10	225/8.85	4,000
Alcoa DuraBright® Aluminum (Front/Outer Rear)	22.5" x 7.5" RW	6.28	8	275/10.83	7,300
Steel (Inner Rear)	22.5" x 7.5" RW	6.20	8	275/10.83	5,000

2023 > **F-53 Motorhome Specifications**

Automatic Transmission Specifications

Make/Type	6-Speed TorqShift Double-Overdrive Automatic with Tow/Haul Mode
Ratios (to 1):	
1st	3.97
2nd	2.31
3rd	1.51
4th	1.14
5th	0.85
6th	0.67
Reverse	3.12
Converter Torque Ratio (@ wide-open throttle [WOT] stall)	2.00
Fluid Capacity (qts.)	19.0
Gearset	Helical
Oil Cooler	Oil-to-air and in-tank
Oil Filter	Internal high-efficiency
Converter Size & Type	12" PCM-controlled clutch apply

2023

F-59 Commercial Chassis Specifications

> Use the Menu above — or the Menu button on your smartphone — to select and view information related to key product specifications, including vehicle dimensions and capacities, chassis systems information, transmission gear ratios and more.

2023 > F-59 Commercial Chassis Specifications

Dimensions

Wheelbase (in.)	158	178	208
GVWR (lbs.)	16,000	16,000	19,500
Description (in.)			
Front Overhang	37.4	37.4	37.4
Rear Overhang	106.0	106.0	106.0
Overall Length	301.4	321.4	351.4
Front Frame Width	41.4	41.4	41.4
Rear Frame Width	34.0	34.0	34.0
Tire Outside Width (Front)	90.5	90.5	90.5
Tire Outside Width (Rear Inner)	73.1	73.1	73.1
Tire Center Width (Rear)	73.0	73.0	73.0
Tire Outside Width (Rear Outer)	94.0	94.0	94.0
Frame Front Section Height	7.5	7.5	7.5
Frame Height @ Front Axle[1]	31.5	31.5	31.0
Frame Rear Section Height	9.2	9.2	9.2
Frame Height @ Rear Axle[1]	32.7	32.7	32.9

NOTE: Dimensions @ GVWR.

Wheelbase (in.)	158/168[2]	178/190	178[2]	208/208[2]
GVWR (lbs.)	19,500	19,500	22,000	22,000
Description (in.)				
Front Overhang	37.4	37.4	37.4	37.4
Rear Overhang	106.0	106.0	106.0	106.0
Overall Length	301.4/311.4	321.4/333.4	321.4	351.4
Front Frame Width	41.4	41.4	41.4	41.4
Rear Frame Width	34.0	34.0	34.0	34.0

Tire Outside Width (Front)	90.5/91.6	90.5	91.6	91.6
Tire Outside Width (Rear Inner)	73.1/67.8	73.1	67.8	72.8/67.8
Tire Center Width (Rear)	73.0	73.0	74.0	74.0
Tire Outside Width (Rear Outer)	94.0/90.7	94.0	90.7	94.0/90.7
Frame Front Section Height	7.5	7.5	7.5	7.5
Frame Height @ Front Axle(1)	31.0	31.0	31.3	31.3
Frame Rear Section Height	9.2	9.2	9.2	9.2
Frame Height @ Rear Axle(1)	32.9	32.9	33.4	33.4

(1) Dimensions are for reference only. Actual heights may vary due to product tolerances.

(2) Parcel Delivery Van Package only.

NOTE: Dimensions @ Stripped Chassis.

2023 > F-59 Commercial Chassis Specifications

Weight Ratings

F-59 Commercial Stripped Chassis – GVWR/Payload/GCWR & Trailer Weight/GAWR/Base Curb Weight

Drive/WB (in.)	Engine/ Transmission	Maximum GVWR (lbs.)	Maximum Payload(1) (lbs.)	Maximum GCWR/ Trailer Weight (lbs.)	GAWR(2) (lbs)		Base Curb Weight(3) (lbs.)		
					Front	Rear	Front	Rear	Total
4x2 — 158	7.3L/Auto	16,000	10,080	23,000/7,000	6,500	11,000	3,054	2,857	5,911
	7.3L/Auto	19,500	13,480	26,000/6,500	7,000	13,500	3,197	2,821	6,018
4x2 — 168(4)	7.3L/Auto	19,500	13,470	27,200/7,700	7,000	13,500	3,198	2,828	6,026
4x2 — 178	7.3L/Auto	16,000	10,050	23,000/7,000	6,500	11,000	3,191	2,754	5,945
	7.3L/Auto	19,500	13,460	26,000/6,500	7,000	13,500	3,198	2,835	6,033
	7.3L/Auto	22,000(4)	15,610	29,700/7,700	8,000	15,000	3,276	3,112	6,388
4x2 — 190	7.3L/Auto	19,500	13,400	26,000/6,500	7,000	13,500	3,209	2,887	6,096
4x2 — 208	7.3L/Auto	19,500	13,310	26,000/6,500	7,000	13,500	3,227	2,962	6,189
	7.3L/Auto	22,000	15,610	26,000/4,000	8,000	15,000	3,276	3,112	6,388
	7.3L/Auto	22,000(4)	15,610	29,700/7,700	8,000	15,000	3,276	3,112	6,388

(1) Load rating represents maximum allowable weight of people, cargo and body equipment and is reduced by optional equipment weight.

(2) Gross axle weight rating is determined by the rated capacity of the minimum component of the axle system (axle, springs, wheels, tires) of a specific vehicle. Front and rear GAWRs will, in all cases, sum to a number equal to or greater than the GVWR for the particular vehicle. Maximum loaded vehicle (including passengers, equipment and payload) cannot exceed the GVW rating or GAWR (front or rear).

(3) Base curb weights shown above consider the strip chassis weight with standard equipment, full fuel tank and all other fluids filled to capacity. Available equipment weights are in pounds as follows (Front/Total): Pull Out Ramp Prep Package (available with 208" wheelbase only) (50/85).

(4) Parcel Delivery Van Package only.

2023 > F-59 Commercial Chassis Specifications

Standard Powertrain/Chassis Equipment Specifications

Drive:	4x2

POWERTRAIN:		
Engine	Application	50 states
	Type	7.3L PFI V8
Transmission	Type	TorqShift 6-speed automatic with Tow/Haul Mode
	Speeds	6-speed with overdrive
AXLES:		
Front Axle	Type	Forged steel I-beam
	Capacity (rating @ ground)	6,500 lbs. (16,000-lb GVWR) 7,000 lbs. (19,500-lb. GVWR) 8,000 lbs. (22,000-lb. GVWR)
	King pin angle	5.5°
	Caster angle	4.6°
Rear Axle	Type — Full-floating	Full-floating, Dana
	Capacity (rating @ ground)	11,000 lbs. (16,000-lb. GVWR), 13,500 lbs. (19,500-lb. GVWR) and 15,000 lbs. (22,000-lb. GVWR)
	Axle ratio	4.30 (16,000-lb. GVWR), 4.88 (19,500-lb. GVWR), 5.38 (22,000-lb. GVWR)
BRAKES:		
Front/Rear Disc	Type	Dual-piston pin slider calipers, bolt-on adaptors
	Rotor diameter — front/rear	15.0"
Power Assist Unit	Type	Hydro Boost (16,000-lb. and 19,500-lb. GVWR); Hydro Max (19,500-lb. and 22,000-lb. GVWR)
Anti-Lock Brake System (ABS)		4-wheel, 4-sensors/4-channel (16,000-lb. and 19,500-lb. GVWR); 4-wheel, 4-sensors/4-channel (22,000-lb. GVWR)
Parking Brake (Driveline Drum)		Trans-mounted, foot-operated, hand release; Parcel Delivery Package, hand-operated, hand release
ELECTRICAL:		
Alternator	Rating	210 amperes, 2,832 watts[1]
Battery	Type	Maintenance-free
	Rating	78 AH., 750 CCA
EXHAUST SYSTEM:	Type	Left-hand, forward-of-rear-axle exhaust exit
FUEL TANK:	Location/capacity	Aft-of-rear-axle (left-hand side fuel fill)/40-gallon
STEERING:	Type	Power, TRW, TAS 40 gear (incl. cooler)
	Ratio	18.4:1
	Wheel	17.5" diameter
SUSPENSION:		
Frame	Type	Ladder-type, single-channel, 36,000 psi steel; Parcel Delivery Package 50,000 psi steel
	Section modulus	9.46 cu. in.
Jounce Bumpers		Front, variable rate
Springs, Front	Type	Parabolic leaf spring, single-stage, constant-rate
	Rating @ ground (min.)	Refer to weight ratings for usage and ratings
Springs, Rear	Type	Parabolic leaf spring, single-stage, constant-rate
	Rating @ ground (min.)	Refer to weight ratings for usage and ratings
Shock Absorbers	Type/size (dia.)	Gas-pressurized (front and rear)/15.0-mm piston rod diameter. Sachs Twin-Tube

Stabilizer Bars		Front: Bar diameter 50.8 mm Rear: Bar diameter 35.0 mm
TIRES:	Type	Steel-belted radial, highway, BSW
	Size	Six, 225/70R19.5G (16,000-lb./19,500-lb. GVWR); six, 245/70R19.5G (22,000-lb. GVWR)(2)
WHEELS:	Type and size	Six, 10-hole disc, 19.5" x 6.0" (16,000-lb. and 19,500-lb. GVWR); six, 10-hole disc, 19.5" x 6.75" (22,000-lb. GVWR)(3)

(1) 210-amp output based on cold performance at 80° F. Actual output is temperature- and application-dependent.

(2) The 245 tire is included on the 19.5K Parcel Delivery Van Package chassis.

(3) The 19.5" x 16.75" wheel is included on the 19.5K Parcel Delivery Van Package chassis.

2023 > **F-59 Commercial Chassis Specifications** > Axles

Front Axle Specifications

GVWR (lbs.)		**16,000/19,500/22,000**
Type		Forged I-beam
Max. Rating @ Ground (lbs.)		6,500/7,000/8,000
Axle	Type	Monobeam
	Material	Forged steel
	Spring centers (in.)	41.87
Ball Joint		Zirked
Spindle	Material	Nodular cast-iron body with forged steel stem
Wheel Bearings	Type	Tapered roller

2023 > **F-59 Commercial Chassis Specifications** > Axles

Rear Axle Specifications

GVWR (lbs.)		**16,000**	**19,500**	**22,000**
Make (standard)		Dana S110	Dana S110	Dana S130
Max. Rating @ Ground (lbs.)		11,000	13,500	15,000
Type		Full-floating		
Driveline Attachment		1,480		
Housing	Type	Banjo, cast carrier		
	Cover attachment	Welded		
Section	Arm dimensions (in.)	4.33 x 4.26	4.33 x 4.26	4.33 x 4.26
Synthetic Lubricant Capacity (pts.; approx. with hubs)		13.6	13.6	13.6
Spring Centers (in.)		42.48	42.48 (41.73 narrow-track axle)	42.48 (41.73 narrow-track axle)
Wheel Bearings	Type	Tapered roller		
Gears	Type	Hypoid		
	Material	Alloy steel		
Ring Gear	Pitch dia. (in.)	12.2	12.2	12.2

Pinion	Mounting	Overhung		
Differential	Type	2-pinion	2-pinion	4-pinion
Axle Shaft	Spline minor dia. (in.)	1.56	1.56	1.61
	Spline major dia. (in.)	1.75	1.75	1.85
	No. of splines (hub end)	34	34	36

2023 > **F-59 Commercial Chassis Specifications** > Brakes

Hydraulic Brake Equipment Specifications — Front/Rear Disc

Type	Axle Usage (lbs.)	Rotor Diameter (in.)		Brake Lining Segment	Area (sq. in.)/ Width (in.)/ Thickness (in.)	Caliper Piston No. Dia. (in.)	Gross Lining Area Per Axle (sq. in.)	Total Swept Area Per Axle (sq. in.)
		OD	ID					
Front Disc	6,500	15.0	10.12	Outboard	20.4/2.32/0.49	Dual/2.60	81.6	366.6
				Inboard	20.4/2.32/0.49			
	7,000	15.0	10.12	Outboard	20.4/2.32/0.49	Dual/2.60	81.6	366.6
				Inboard	20.4/2.32/0.49			
	8,000	15.0	10.12	Outboard	20.4/2.32/0.49	Dual/2.60	81.6	366.6
				Inboard	20.4/2.32/0.49			
Rear Disc	11,000/13,500/ 15,000	15.0	10.12	Outboard	20.4/2.32/0.49	Dual/2.60	81.6	366.6
				Inboard	20.4/2.32/0.49			

2023 > **F-59 Commercial Chassis Specifications** > Brakes

Brake Master Cylinder Specifications

Type	Usage	Bore Dia. (in.)
Dual System, Dash-Mounted	16,000-lb. GVWR/19,500-lb. GVWR Non-Parcel Delivery Van Package	1.63
	19,500-lb. Parcel Delivery Van Package/22,000-lb. GVWR	2.00

2023 > **F-59 Commercial Chassis Specifications** > Brakes

Brake Booster Specifications

Make/Type	Usage	Booster Type	Boost Ratio
Dash-Mounted	16,000-lb. GVWR/19,500-lb. GVWR Non-Parcel Delivery Van Package	Hydro Boost	8.19
	19,500-lb. Parcel Delivery Van Package/22,000-lb. GVWR	Hydro Max	21.1

2023 > **F-59 Commercial Chassis Specifications** > Cooling Systems

Cooling System Specifications

Engine	Cooling	Trans. Usage	Radiator								Fan Specifications		
			Frontal Area (sq. in.)	Core Size (in.)			Rows of Tubes	Fins Per Inch	Cooling System Capacity (qts./liters)	In-Tank Trans. Cooler	Type	No. of Blades	Blade Dia. (in.)
				Height	Width	Thick.							
7.3L PFI V8	Std.	6-Speed	857	28.4	30.19	1.42	91	17.8	5.9/5.6	Std.	Engine-Driven	9	20.3

2023 > **F-59 Commercial Chassis Specifications** > Cooling Systems

Auxiliary Automatic Transmission Oil Cooler Applications

Engine	Transmission	Cooler — No. of Plates
7.3L PFI V8	6-speed automatic overdrive	31

2023 > **F-59 Commercial Chassis Specifications**

Engine

Driveline Layout	Front Engine, Rear Wheel (RWD)
Engine Type	**7.3L PFI V8**
Displacement (liters/cu. in.)	7.3/445
Horsepower (@ rpm)	335 @ 3,750
Torque (lb.-ft. @ rpm)	468 @ 3,750
Compression Ratio	10.5:1
Valvetrain	OHV
Valve Operation	Push rod/rocker arms
Bore & Stroke (in.)	4.21 x 3.98
Main Bearings	5
Induction	Naturally aspirated
Fuel System	Port fuel injection (PFI)
Fuel Requirement (octane)	87 (min.)

2023 > **F-59 Commercial Chassis Specifications**

Fuel System Data

Electronic Fuel Injection	Port fuel injection

Fuel Pump	Single electric-in-tank, high-pressure
Fuel Filter	In-tank, large-capacity (one)
Air Cleaner	Dry element, replaceable

2023 > F-59 Commercial Chassis Specifications

Steering Specifications

Wheelbase (in.)	Power Steering(1)	Turning Diameter (ft.)
	Gear Ratio	Curb-to-Curb
158	18.4:1	45.4
168	18.4:1	48.3
178	18.4:1	49.7
190	18.4:1	52.2
208	18.4:1	56.1

(1) Power Steering Fluid Cooler is standard.

2023 > F-59 Commercial Chassis Specifications > Suspensions

Frame Specifications

Wheelbase (in.)	No. of Crossmembers	Maximum Side Rail Section(1) (Height x Width x Thickness) (in.)	Section Modulus (cu. in.)	Yield Strength (psi)
158	8	9.16 x 3.00 x 0.25	9.46	36,000
168	8	9.16 x 3.00 x 0.25	9.46	50,000
178	8	9.16 x 3.00 x 0.25	9.46	36,000
178 (PDP)	8	9.16 x 3.00 x 0.25	9.46	50,000
190	8	9.16 x 3.00 x 0.25	9.46	36,000
208	9	9.16 x 3.00 x 0.25	9.46	36,000
208 (PDP)	9	9.16 x 3.00 x 0.25	9.46	50,000

(1) Measured to inside of metal.

NOTE: PDP = Parcel Delivery Package

2023 > F-59 Commercial Chassis Specifications > Suspensions

Shock Absorber Specifications

Type	Usage	Front			Rear		
		No. Used	Piston Rod Dia. (mm.)	Type	No. Used	Piston Rod Dia. (mm.)	Type
Sachs Twin-Tube	Std.	2	15.0	Gas-pressurized	2	15.0	Gas-pressurized

2023 > **F-59 Commercial Chassis Specifications** > Suspensions

Spring Specifications — Front Leaf

Combined Rating @ Ground (lbs.)	Number of Leaves	Total Thickness (in.)	Length (in.)	Width (in.)	Deflection Rate[1] (lbs. per in./spring)
6,500	2	2.73	63.0	4.0	510
7,000	2	2.73	63.0	4.0	585
8,000	2	2.73	63.0	4.0	585

(1) Single-stage, constant rate springs.

2023 > **F-59 Commercial Chassis Specifications** > Suspensions

Spring Specifications — Rear Leaf

Combined Rating @ Ground (lbs.)	Number of Leaves	Total Thickness (in.)	Overall Length (in.)	Width (in.)	Deflection Rate[1] (lbs. per in./spring)
11,000	2	2.04	64.0	4.0	1,425
13,300 (PDP narrow axle)	3	6.86	64.0	3.0	2,146
13,500	3	3.08	64.0	4.0	2,150
15,000	3	3.08	64.0	4.0	2,150
15,000 (PDP narrow axle)	3	6.86	64.0	3.0	2,146

(1) Single-stage, constant-rate springs.

2023 > **F-59 Commercial Chassis Specifications** > Tires and Wheels

Tire Specifications

Size	Tread Type & Sidewall	Tire Manufacturer	Rim Width (in.)	Section Width[1] (in.)	Ply/Load Rating	Inflation Press. (psi)	Load Limits @ Max. Inflation Press. (lbs.)	Static Loaded Radius (in.)	SAE Revolutions Per Mile @ 45 MPH
225/70Rx19.5	Highway-BSW	Continental®	6.0	TBA	14/G	95-100[2]	TBA	15.00	643
245/70Rx19.5 (incl. with Parcel Delivery Package [59P])	Highway-BSW	Goodyear®	6.75	9.94	12/G	95[2]	3,890/3,655	15.30	631

(1) Tire and rim maximum width.

(2) 16,000-lb. GVWR = 85 psi, 19,500-lb. GVWR = 95 psi (front) and 100 psi (rear).

2023 > **F-59 Commercial Chassis Specifications** > Tires and Wheels

Wheel Specifications

Wheel Type	Wheel Size	Nominal Offset (in.)	No. of Studs	Bolt Circle (mm/in.)	Max. Wheel Capacity Load (lbs. @ ground)
Steel	19.5" x 6.0" RW	5.35	10	225/8.85	3,750
Steel	19.5" x 6.75" RW	5.50	10	225/8.85	4,000

2023 > F-59 Commercial Chassis Specifications

Automatic Transmission Specifications

Make/Type	6-Speed TorqShift Double-Overdrive Automatic with Tow/Haul Mode
Ratios (to 1):	
1st	3.97
2nd	2.31
3rd	1.51
4th	1.14
5th	0.85
6th	0.67
Reverse	3.12
Converter Torque Ratio (@ wide open throttle [WOT] stall)	2.00
Fluid Capacity (qts.)	19.0
Gear Set	Helical
Oil Cooler	Oil-to-air and in-tank
Oil Filter	Internal
Converter Size & Type	12" PCM-controlled clutch apply

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